On the RATIONALE *and* WORKING *of the* PATENT LAWS. *By the* REV. J. E. T. ROGERS, M.A., *Professor of Political Economy in the University of Oxford; and, Tooke Professor of Economic Science and Statistics at King's College, London.*

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I.

ONE of the greatest advantages which the members of this Society possess, to judge from the papers which are occasionally read at their meetings, is that of discussing on purely abstract and scientific grounds the principles on which economical facts are founded, the effect of social practices, and the speculative consequences which might ensue from the removal or modification of rules in action which are so habitual, as not to be out of the prejudice of men obviously capable of actual alteration. It has been, I believe, almost uniformly the case, that all great economical reforms, and not a few social changes of vast and increasing significance, have steadily advanced from the condition of a paradox into that of an axiom, and have met with a final acquiescence as universal as was their original condemnation. The adoption of a limitation on the hours of labour, of the sex employed in some kinds of labour, of the half-time system in the work and education of children, of the principle that able-bodied labour should not be ordinarily relieved, except under the regulations of a workhouse, and a variety of other economical reforms have, I understand, been discussed before this Society in a grave and unprejudiced manner, long before they have been approached as practical questions either by legislation or by the popular press. It is, therefore, a most important and valuable privilege that questions may be raised here and in similar societies, before conclusions derived from them are sent out to bear the brunt of that intolerance and irritability with which popular politics and popular criticism ordinarily grapple with economical novelties. And it is an equal advantage, I may be perhaps allowed to say, that while this Society discusses, it does not judge; and therefore is not, and does not affect to be, an arbiter of economical questions, but a means of ventilating evidence on the most important social problems, and the largest economical interests. The writer, therefore, of this paper feels that there is no place in which he can more unreservedly alledge the reasons which seem to justify adverse conclusions to the practice of granting patents.

II.

I do not propose to go through the economical history of the legal sanction given to what is called property in invention. The members of this Society are well aware that in its origin the privilege of sole sale in cases where the applicant can satisfy legal authorities that *prima facie* he has been the first to devise an article which shall be in demand, and may be appropriated by others, is only a branch of that mischievous and odious prerogative which sovereigns in most European countries have assumed—that of granting monopolies. The reign of James I, in which period the worst forms of patent privilege were created, was as much characterised by the encouragement given to projectors, as inventors were then called, as by those licenses of sale, for which the crew of Mompessons were so detested. Such licenses are not extinct in our own time. Many of us have witnessed the abolition of the East India Company's privilege of sole trade with the East; all have seen the extinction of the Hudson's Bay Company; all are familiar with what is practically the monopoly of the Bank of England in the issue of a legal tender paper.

It does not follow that such sole privileges are necessarily mischievous. Most persons are agreed that the trading powers of the East India Company were a public inconvenience. A similar judgment has been passed on the Hudson's Bay Company. But on the other hand, it is not generally held that the Bank of England monopoly is hurtful to public interests. In all such matters, what is expedient to the nation at large, is always the question to an economist, though it may be contained in the apparent incongruity of a mercantile monopoly with that principle of freedom which underlies all economical reasonings, and is the basis of all material prosperity. But though a limitation on individual freedom may be necessary, it must be distinctly and continuously proved to be desirable.

III.

The arguments in favour of the practice of securing a monopoly of sale to inventors of articles in demand are generally three. The first is, that such an invention is property, and society is bound to maintain the rights of property; that is the peaceable and secure possession of what a man has appropriated by his own labour. The second is, that the existence of this legal privilege is a powerful stimulus to invention. The third, that the privilege of sole sale, limited as it is by a defined term, is compensated by the fact that the invention is specified, published, and thus finally secured to the public after the term has expired. I purpose, with the patience of the Society, to argue on these points at a little length.

Property is necessarily that which *is capable of appropriation* and *appropriated*. To be appropriated it must be distinguishable. Any indefinite and indefinable claim is a nuisance. Owners of property may have a common interest, and may therefore surrender their distributive rights to a body of trustees or directors, but the interest they have is always supposed to be capable of division, limitation, and identification. No two or more persons can have the same right of property in the same single object or single utility. An acre of land, a share in a railway, a pound of sugar, a sum in consols, are property, because they can be *so* limited and identified, as that no person can be aggrieved or harmed by the limitation, or aver that the particular quantity what one man possesses—and possesses by a legal appropriation, is that which another man is just as capable of acquiring. In short, the ground on which economists recognize the existence of property, is to be found as much in the fact that a special appropriation has been made of a derived utility, similar productions of which utility are in the power of other labourers, as in the conviction that insecure possession would lead to the destruction of all productive energies. As a rule, then, all these privileges which have been possessed by individuals and corporations of the sole sale of commodities and utilities, are exploded with the common consent of all statists and economists. Whatever cannot be essentially and readily assigned to an individual, partakes of that insecurity which renders the object impropriate.

Again, it is essential to the protection of property, that equal protection should be accorded to equal or similar kinds of property. The law would fall short of its obligations, if while it protected a man in the possession of his purse, it failed to protect him in his coat; if it could find a means by which to secure him peaceable possession of his land, but denied him equal security in the stock which he possesses or claims to possess, in the public funds.

Nor is that property which is naturally distributed. There is no property in air, in flowing water,—though there may in its force, for this is a power capable of limitation—or even in *ferœ naturæ*. None of these have a permanent place, an assignable locality, however much the locality may be suspected, and therefore cannot, in their natural state be objects of property. The exact logical temper of English law cannot recognize what we call game as property, and can only protect it by an exaggerated law of trespass. What may be another's as readily as it may be one's own, cannot, except *in transitu*, be appropriated.

It does not follow, indeed that all property is of a material character. To omit the right of ownership which an individual may have in the indebtedness of others under private or public contracts; it is clear that a man's character is his property, and is often a very

valuable and marketable property. The sign by which a man distinguishes his work, which is at once a form of credit and an evidence of character, *i.e.*, a trademark, is as much a property as a man's signature to a check and a bill of exchange, and as fairly demands all protection which the law can give, on the general hypothesis of average caution, as are demanded for a man's land and chattels, provided he takes reasonable precaution for their safety. Apart from the relation which such a mark bears to the producer, it fulfils a great and important public requisition, though one which is constantly ignored in all reasonings on legal protection, in guarding the interest of the consumer. One may remark by the way, how generally the interests of that important personage —the consumer—are lost sight in the demand for protection to the producer.

Now the position of the patentee appears to be as follows. He believes, and perhaps on good ground, that he has discovered, and if you please, elaborated some article of considerable utility and great demand. He wishes to advertise his invention to the public, his consumer, and to guard against the contingency of the public, or any members of the public generalizing the power of producing his utility. He is willing to admit that his traditional and natural exaggeration of the merits of his own invention is checked by the fact that the public, the judges of his performance, will value his invention at its worth; that is, that it will sell or not, according to the taste or convenience of the customers which he wishes to conciliate; but on the other hand, he claims to limit their choice. His bargain is to give the public a prospective interest in the invention, in return for a temporary monopoly of the process. During the tenure of this monopoly, he allows the public the benefit of his invention at whatever price his discretion or their necessities suggest to him to impose; and he precludes the public not only from itself producing, but from the capacity of production, or from the capacity of purchase from a rival producer, however *bonâ fide* and certain the invention of such a rival is. It is the old theory in short of occupancy, of squatting, transferred to the industrial centres, or rather the highways, of modern civilisation; and of squatting upon materials and powers which are the property, not of individuals, but of the human race. Nay, the claim of the inventor is wider than that of the squatter. It more nearly resembles that which we might conceive would be made if the principle of patent were carried completely out, a demand on the part of a navigator who has discovered a new country, to prohibit, except by the payment of a royalty, any person from settling on the land in question. Such a demand is not without example in the early history of crown monopolies. It does not follow, I repeat, because certain objects are of

great utility, permanent demand, absolute necessity that individuals should be entitled to claim a prohibitive ownership in them.

What people invent—I am speaking of material utilities—is either the result of a sudden conception, or of the elaboration of well known and general natural laws. In neither case, unless the inventor assumes that his genius in discovery is shared by no other man, and that what he has invented can be invented by no other human being, or that the logical sequence by which he has made his conception available for purposes of human utility belongs to himself alone, and could not have been worked out by any other man, is he entitled to a property in such inventive process. It is hardly needful to say, that such an assertion would be a piece of insolent vanity. The law may give him a property, as the law may allow any other privilege which invades the liberty of other men; but his right has a factitious and not a natural origin; and as the law could not distinctly avow that the privilege it confers is one, the utility of which it is competent to recognize; it simply, formal and other conditions fulfilled, demands that the privilege sought for shall not contravene any existing right based upon the known application of industrial powers and processes. In other words, it grants a monopoly to the first applicant. Other persons may have discovered and elaborated the same process, but the privilege is bestowed on the earliest to ask for it. By a perfectly independent train of thought, another person may have discovered simultaneously exactly the same utility, but he has been last in the race, and he must forego his natural privilege of labour; and the consumer, whom nobody even in these days of free trade seems to think deserving of much consideration, has to bear the charges of the sole and protected producer.

IV.

It is the custom of those who defend the existing practice, to say that they do not claim a patent for principles, but for the application of principles. But a principle without an instance, is a logical absurdity. People discover the principles of physical science—the groundwork of all material utilities, from the observation of facts; and the inventor of a principle is generally at a long interval from the observer of those facts which are turned to marketable conveniences. The largest inductions of physical science have been made long after the facts from which these inductions are derived have been familiar processes.

But even if one allows the distinction between a principle and a process, it is not difficult to see how unequally favourable the law is to inventors. A man who discovers a mechanical contrivance which a hundred men could as well have invented as himself, and which

many frequently do invent, either simultaneously or speedily, is protected against them and the public; while another man who devises some plan which is equally, perhaps far more useful to society, and which is as much the result of thought, anxiety, and risk, as the process of any mechanician, has no such protection awarded him. If the laws were consistent, such a person should be protected equally; and the natural consequence that everybody would be protected against everybody, and that everybody would have special rights in common powers against everybody else, would bring about a fatal isolation of interests, or what is more likely, a compulsory regulation of these peculiar claims. The difference, if any, can only be one of degree.

The principle on which Mr. Mudie's circulating library is founded, is that of furnishing a succession of books at easy rates to subscribers. But the pains, the thought, the anxiety, the risk at which this principle was carried out, were as well defined and elaborate a process, as any which ever afforded the fulfilment of the day dreams of inventors,—steady demand at arbitrary prices. Mr. Mudie has no patent in his process, and is subject, no doubt, to active competition on the very plan which he elaborated.

Again, the projectors of the London and Westminster Bank had a principle, that of furnishing a system which should afford peculiar advantages to the banking public. Unless I am misinformed, the process by which they attracted custom, was that of offering interest on deposits, and trading on the difference between the rate allowed and the market rate of discount. The process was novel; the risk great; the calculations necessary, were wide, precise, and minute. They got no patent, but great hostility from a patented monopoly, the Bank of England, and from the jealous alarms of the private banks. Now they have abundant, if we can trust rumour, too abundant imitators.

It may be said that if the law fails to protect one set of industrial processes, it should not the less protect others. Not so, however, if they are precisely the same in character. Would the advocates of patents insist that such inventors as I have indicated, should have the sole privilege of their processes? They should do so in order to be consistent.

V.

Some persons—there are names of great worth among them—have suggested that a board should be constituted which should determine the utility of patents, and award premiums or prizes for inventions of manifest utility. It is a sufficient answer to such a scheme, that both inventors and the public would view such a board with the greatest suspicion. It might be composed of two elements; a jury

of the public: or a council of inventors; who must be successful or they would be sure to condemn alien projects; who must not be successful, or they would be sure to deny merit to alien inventions; or lastly a board of permanent officers. It is difficult to see which alternative would most certainly develope gigantic jobs.

But even if they were ever so just and ever so wise, what utilities should they further? Are they to confine themselves to an estimate of the public utility of a mechanical contrivance, or to extend it to the utilities of a well devised circulating library, or a sagacious banking system? Nay more, are they not on the hypothesis of the public good, to accord the benefit to all schemes which have as their foundation a considerable public service? If so, Government will go far beyond the limits which we have assigned it in this country, and take upon itself the functions of a Providence special and almost Divine.

Mr. Erskine Clark, of Derby, has had before him in common with many worthy persons a great wish to discover the way in which habits of thrift may have scope given them among the poor. His process, and it is very elaborate, though very effective, is a penny bank. I know no patentee who has a greater right to consideration from a council of equity, appointed to interpret the utility of a process than this gentleman has. But I should be very much surprised to see the committee of the British Association recognize these claims.

But the bargain of the inventor with the public, is thoroughly one-sided. If it be his interest to keep his secret, he infallibly does so, not so much from the cause that a patent is expensive, as because it is his interest. What he demands is the right of monopoly against the public, provided that he chooses to take the public into his counsels. It is perfectly true, indeed it is insisted on by the advocates of the rights of invention, that nothing can compel him to disclose his discovery. Does he ever do so except on the ground that the profits of the monopoly would be more valuable than the profits of the secret?

The wretched impostors who traffic in the follies and weaknesses, and sometimes the vices of their fellow-men, the vendors or inventors of what are called patent medicines, never I believe communicate their valuable secrets to the public. By a very just and wise judgment, the occupier and advertiser of a nostrum, is branded by the medical profession with the name of a quack. I know no occupation in which perseverance and careful observation, and laborious thought are more lavishly given than in the medical profession, there is none certainly which entertains so sound a contempt for the inventor and monopolist of a specific, none so ready to communicate its discoveries.

VI.

There are other parties too who decline the advantage of a patent right, and who are of a far more useful and genial turn than the patent medicine vendor. I hope I shall not in so grave a society as this be thought anything but serious when I say that that there are very few among us who have not experienced the pleasurable emotions which Messrs. Lea and Perrin's ingenious combination called Worcester sauce imparts to the eating of cold mutton. But these inventors are content with the public judgment, are satisfied with the profits which their extended trade gives them, and are willing to abide by competition. And this is only one among very many of the cases in which the inventor has exercised his undoubted privilege of vending a product, the process of which is a secret. Yet, to be consistent, the advocates of a patent system, if they affect to consider the interests of the public, should maintain that the process of all inventions should be disclosed; not that a discretion should be given to inventors, whether the public will or not, of claiming a monopoly according to their own pleasure, or of keeping their secret.

I cannot therefore discern a single characteristic in mechanical inventions which constitutes a claim to the distinctive features of property. As regards the public, I find that the purchase of articles really useful, is burdened with the charge of the capital sunk in the legal and other fees of the Patent Office, in the necessity laid upon it to compensate the particular expenses of the particular patentee (and his proofs of discovery or adaptation may have been difficult, while another man's may have been easy), and by whatever charges besides his vantage ground over other inventors may afford him to exact from the public. And I can quite conceive it possible that he may be a grievous hindrance to other inventors, without being able to reap much advantage himself, in the same way as a person who had gained a right to occupy an apple stall in the midst of a crowded thoroughfare would be to traffic and passengers. Nor do vague and angry declarations that invention is property, and the lavish use of the expressions, "pirate" and "pilfer," and "stealing the fruit of "other men's minds" and labour, prove more than that certain persons gain an advantage, rightly or wrongly, which they wish to keep. Economists are well aware of how freely terms of reproach have been lavished on those who have successfully proved economical necessities, and are not the less aware of the duty laid upon them by the abstract study of this science, that they should do their best in protecting as far as they can the interests of the general public, *i. e.* the interest of the consumers. It is needless to say that this protection consists generally in saving him from those friends, who affecting to consider his interest, are really advancing what they know to be their own.

There are persons indeed who make no small gain out of this facility for petrifying the natural powers and processes of the human mind, or at the best for diverting it from obvious paths. The fortunate purchase of some adaptation of a physical law in mechanics or chemistry, will be the foundation of a capitalist's fortune, the more so when, society having established a demand out of some new want, he is the lucky winner of the privilege of supply by mere priority of application. There are persons too who are misled with the hopes of successful invention, and who, possessed by the familiar spirit of adventurers, are thoroughly intoxicated with the dreams which the ever varying romance of patent privileges engenders. To such persons, the loss of the dream is as great a loss as that of profit to others. And there are, I do not intend the statement to be invidious, a certain number of professional persons, to whom the agency, the advocacy, and the impeachment of patent claims are the source of professional distinction and pecuniary emolument. But it does not seem that these interests should stand in the way of a critical inquiry into the rationale of the privileges they are founded on, or that the existence of a legal right should be construed as though it were a natural and equitable one.

It is said that the legalizing of patent privilege is a direct stimulus to invention. I will not delay on the question as to whether the legislative aids of bounties or protection, are, or ever will be safe and healthy motives to industrial processes. In the abstract, all economists I believe are convinced that they are nugatory, mischievous, unwholesome. The history of trade and of prices is full of evidence to the generally evil effects of such external aids. A tolerably large acquaintance with the history of prices, convinces the author of this paper that the rule has no exception. If particular cases can be defended, they must be defended on a particular showing and on special grounds. Nor is the defence that under such a system as that which has prevailed in this country, great industrial energies and vast comparative wealth have been evoked and accumulated worth a serious reputation, nor even a passing notice, if one did not remember how inveterate is the fallacy of *post hoc, ergo propter hoc.*

VII.

The real question is to be settled by the judgment of experts, and the practical working of the patent laws on inventors. It is to be admitted that the first of these tests is of a very various kind, and it must be allowed that a decision on the second, as English industry has constantly laboured under the disadvantage, or if it sounds better, been sustained by the protection of the law, is speculative.

The classical authority on the object, and the working of the

patent laws, is the evidence in the report of the Lord's Committee, in 1851. A considerable portion of the evidence is relative to certain provisions in certain bills, then before the Houses of Parliament, but not a little information, and of the most important kind on the general operation of a system which proposes to stimulate invention by defending it, and to reward discoveries and inventions of a particular kind by a monopoly of sale, is to be found in the report in question.

As may be expected, the evidence and the opinions given by the different witnesses, are of a very conflicting character. Some treat the rights of inventors as among the sacred kinds of property, and that any invasion accorded to the public to appropriate "inventions "which result from the labour of inventors," would be logically "extended to the results of any other class of human labour," that is to say, that the plan by which A makes a machine is *ipso facto* as much property as the machine itself. Again that the recognition of patent rights is part of the "broad principle of recognizing honesty "by discouraging piracy," by which I conclude is meant piracy in the general sense. These are the views of Mr. Cole.

Others on the other hand are wholly averse to the continuance of patents in whole or in part. One witness avows his conviction that at present the patent law "discourages" inventions, for that while it appears to offer protection and ultimate gain to parties who are inventors, it leads to a considerably smaller number of inventions than would otherwise be brought out for the benefit of the public, and he believes that practically it involves very great loss upon the class of inventors as a body, a loss which he thinks they could not sustain, if there were no patents or no exclusive privileges at all granted to them. And the same witness enters into an elaborate account of the way in which the principle of granting patents affects the energies of inventors, and impliedly the rights of mankind to the accumulations of past knowledge, and the legitimate and necessary inferences of natural reason, stimulated by ordinary and common economical forces. Again the same witness avows his conviction, that the abolition of the whole patent system would be "an immense benefit "to the country, and a very great benefit to that important class of "men whom we call inventors, who are at present ruined, and their "families ruined, and who are, he believes, a great injury to society." The witness is Sir Isambard Brunel.

It is invidious and indeed impossible to determine the comparative value of contradictory opinions on questions of fact, and questions of effect, especially in cases where the natural force of conflicting authorities is very great. I say natural, for there can be no reason to conceive that Mr. Cole's prejudices or interests would have led him to combat what I conceive are the interests of the public, or that

Sir Isambard Brunel was likely to decline or disdain a legal protection which he might have thought just and expedient. I confess to holding the expressed opinions of patent agents, of barristers whose practice is specially concerned with patent causes, and of that important class of men who are continually advocating their own capacities, and underrating the judgment of the public as to the utility of their discoveries, in slighter respect. And I do so, not from any wish to throw any doubt on their integrity or conscientiousness, but because we must needs, as such, dispute the conclusions with which habit and custom, and the general conservatism of men's minds on the special method of their special occupation, are apt to control their judgment.

Evidence for and against any patent system at all, might be multiplied out of the report to which I have alluded. It is needless however in the existence of such a record; and the study of it may be commended to those who, having the interest of the public, and of all who can claim a real or supposed property before them, wish to give a true deliverance on this question, the gravity of which if one considers either public interests, or at the least the position in which the contingent occupiers of patent rights are placed, cannot be exaggerated. It is not I think invidious to say that the mass of affirmative evidence is on the side of the doubtful, of the negative on that of the independent witnesses. Nor is the supposed right of the inventor much helped by its supporters, when the evidence of those who discuss the best way in which it may be secured in the patent office, is contrasted. Some advocate a cheap system of patents, and declare that the real harm to inventors arises from the charge which is levied on the process of security. With those who hold that invention is property, such a view is logically necessary. To put capricious charges upon the right of claiming one's own, is the worst wrong to which the holder of property can be subjected. It is difficult however for such reasoners to meet the objection urged by the opponents of a cheap patent system. It is said, and one cannot see how such a statement can be gainsaid, that a ready and cheap method of patenting would give such an opportunity for encroachment on the processes of invention and adaptation, as would bring all improvement in a very short time to a dead lock. If in fact invention is property, it should be vindicated cheaply and rapidly. If it be vindicated cheaply and rapidly, there is and can be no limit to the hindrance which inventors may put upon other peoples energies, and by implication on the increase of national wealth.

VIII.

I have hitherto considered this question from the view of public interest, from what appears to me to be the case in relation to the

public, who are deprived of a right on the plea that a stronger right may be urged against them. But the condition of the inventor, of the nominal plaintiff, the John Doe of the patent laws, demands some notice, even on the plea of humanity and pity.

Most persons I believe, even those who advocate most strongly the extension of facilities beyond those afforded at present for the protection of inventors interests, concur in recognising that he rarely gets a return even for his actual expenses in adapting his invention to immediate use. He is stimulated by the promises of protection held out to him by the law, to devote great time, and not a little money to the dangerous pursuit of contingent profit; of all speculations his is the most precarious. For natural reasons, the occasional success of some one man, who either in his own person, or far more frequently in the person of an assignee of the invention, the capitalist who gets the benefit of the monopoly for some small consideration; is sure to call into activity a host of speculations which connot in the nature of things be any profit by their appropriation, however grievous an inconvenience they may be in the cause of mechanical or other improvements. A mere inventor is strongly infected with the spirit of gambling, and open to the worst misfortunes which can ensue from such spirit. Nay, he is more liable to the most dangerous forms of this mental disorder, because gamblers are more or less open to reasonings from the doctrine of chances and the occurrence of events as well as to the information they may get from the judgment of others, while the inventor, like the poet of the satirist, is ordinarily the prey of his own self love, and is the worst possible judge of the weak side in his specialty. I believe that there are more men ruined in the law courts out of patent cases, and in the exciting and dangerous visions which these legal privileges afford them than by almost any among the stimulants to unreasoning cupidity. Some indeed among those who have had experience of how dubious is the boon which the patent office affords them, are thoughtful enough to avow their distrust in all its presumed advantages; and, like the wise man of old, decline the box of Pandora, the worst among the congregated evils of which is perhaps the hope which is left at the bottom.

Most of the best inventions we are told are the work of mechanics. It is easy to see why this is. The labourer is principally urged, and the law is a fundamental one in economics, to get the greatest possible result with the least possible expenditure of *force or labour*. It is only in a more remote degree that the capitalist, the producer, is urged by the same motive. His wish is to get the largest amount of produce possible, out of the least expenditure of *capital*. The interest of the mechanic in an invention which shortens labour is immediate, of a capitalist indirect. To adopt the invention is often

an affair of cost, of risk, of substitution. Now as the mechanic is the natural inventor, and the capitalist is naturally slow to accept inventions, the makers of a system which shall give the inventor a position hostile to the employer of labour, impedes, or at least postpones, that healthy relation which should subsist between the employer of skilled labour—and the faculty of invention or adaptation differs only in degree from that of other skilled labour—and the labourer himself. If no patent laws existed, it would be to the interest of the capitalist to develop and reward the skill of those whom he employs.

I have heard reasonings similar to those which I have alleged, used by capitalists in the largest sense of the word, where occupation induces them to purchase inventions, and who are forced to secure all adaptations out of the competition to which they are subject. And it will be found in the volume of evidence to which I have referred, that several of the witnesses believe that a fuller reward to invention, and even a more healthy and regular stimulus would be accorded to this particular capacity, if no law interposed between the supply of the inventor and the demand of the capitalist.

That almost all the benefits, the solid advantages of protected invention are reaped by capitalists who have not invented themselves, or have done so in very small degree, is generally admitted. To such persons it may be that the abolition of patent rights would be a comparative loss. I say it may be, for it is not wholly certain. The opportunities for vexatious prosecution for piracy, or for infringement of rights, are so multitudinous, that the purchaser of an invention pretty surely learns that like the Bedouin, every man's hand is against him. How far the risk of infringement diminishes the payment which is made to the inventor, I cannot say, certainly it should do so; and certainly the labour of discovering whether a man's *bonâ fide* invention has not been appropriated by some other *bonâ fide* inventor, or even, as in the story told by Mr. Woodcroft, was not originally the property of Hero of Alexandria; is necessarily to be set off against the price which is procured from the capitalist. It can be no light thing to make a long and weary search through nearly 40,000 patents, specified with more or less exactness.

If, however, it be a mere question for capitalists, if the inventor after all gets the fox's, and the capitalist the lion's share, it is still less a question of sympathy and right. It is still more reduced to the lowest conception of a monopoly. Nay, the claim urged upon the public is a fiction in which the nominal plaintiff is the inventor, but the real one is a speculative capitalist.

I shall not detain the Society long with the argument that the disclosure of the invention compensates for the monopoly of the patentee. The reasoning is, as I have said, one-sided, because

the inventor is at liberty to retain as well as to disclose his invention. No one can call that a fair bargain which is voluntary on one side, and involuntary on the other. General grants, by a wholesome provision of law, are void: and by equal reason, contracts which are commenced and carried out without the *ipso facto* consent of any among the parties interested, would, I imagine, receive no mercy at the hands of lawyers, as they would deserve none in the judgment of moralists.

Even, however, if the bargain be made consciously, it may be a very bad bargain, and therefore a very inexpedient one. Any claim to an invasion on the liberty of others, is on its trial. Even mere contracts of a voluntary kind may be rescinded, if no value is received by one of the contracting parties. And I imagine, that in natural justice, the right of *bonâ fide* invention subsequent to another invention which has been patented, is at least equal. A man may at least pay off a prior mortgage with the produce of another mortgage on better terms. Not indeed, that it is politic to rescind voluntary contracts, even though they are in themselves inexpedient. But it is one thing to stand by the consequences of one's own acts, another to endure the principle that one should be for ever bound to the performance of similar acts. It is, therefore, perhaps worth while to point out in what the service of an inventor differs from the service of one who has an admitted claim to part of the produce of future industry.

Guarantees given for advances made to the community for the public service, have their foundation in natural justice. At the crisis, the community, anxious for self-preservation, and judging that the contract into which it enters is as much a prospective as an immediate benefit, mortgages its industry for a loan. It may be that it was inexpedient to create such a mortgage, it may be that it was unjust to posterity, which, nevertheless, receives a far larger beneficial inheritance from a previous generation, than it does obligations; but the contract was for a real, limitable, tangible value received. But no such proffer is made by the inventor. He claims that you shall take—not his money or his money's worth—but his priority of discovery; and he does not make terms with you by competition, or at your discretion, but demands that you shall tax yourselves for a definite period at his discretion and for his interest. The very right that he arrogates, is an acknowledgment that some one else, or may be yourself, could have supplied equally well with him. He denies the right of competition, and he even takes away the right of choice.

There is one point which I may briefly advert to in connection with the presumed originality of patented inventions. Inexperienced persons are so startled with the novelty of processes and the magnitude of results on these special kinds of human intelligence

which are made the subjects of legal monopoly, that they are apt to conceive that some transcendental and almost supernatural energy must have been the origin of these industrial processes. But to those who are moderately acquainted with facts, the chief utilities which have been patented, appear to be what they really are, little more than common place calculations. I have heard an eminent advocate of the patent system avow that the claims of the patentee are far more founded on laborious adaptation than on splendid discovery. And if this be the case, as I believe it almost invariably is, the argument is driven back again to the position which I laid down in an early part of this paper, that the system at present in existence gives a special privilege to some kinds of laborious adaptation, and denies it to others.

IX.

The Society will probably recognise that in what I have alleged I have confined my observations to patents properly so called, and have omitted all mention of copyrights. Still less have I entered on the criticism of another class of interests which is fundamentally connected with this subject, the prudence and economical defence of endowments. I cannot, at present, even for the briefest time dwell on the latter. I only mention the case, that I may not be supposed to have ignored it; and I may perhaps conclude this paper, in which I have already trespassed a long while on your patience, by pointing out what occurs to me as a radical distinction between copy and patent rights. And in so doing, I may perhaps say that I believe myself to be quit, in so far as I may be an author, of any profound belief that the compositions of my pen, will possess any saleable merit; and that, therefore, if I seem to defend the rights of authors, I do so with none of that animus which I have ventured to suggest is a leading principle with inventors.

There are, at least, two characteristic forms of copyright. The one is in books, by which I mean generally, literary compositions, the other is in patterns. With respect to the former of these, it is manifest that they partake far more of the nature of property than inventions do, from the fact that they are capable of distinct appropriation and limitation. There is nothing, as I have said before, to hinder any two persons from making simultaneously the same discovery of the same process; as a matter of fact, it is, I believe, the case that nearly all the most important discoveries in mechanical and cognate processes, have been made simultaneously. That the same circumstance is not known to have happened in all cases, is due, I imagine, quite as much to the legal position of the first appropriator, as to any special gift or power which the appropriator in question has possessed. A second person makes as *bonâ fide* a discovery as

the first, but finds that the privilege of production has been anticipated, and therefore has no opportunity of publishing the fact of his invention.

But the case is far different with literary compositions. No two persons could have, independently of each other, written the same book. No law could give any author a privilege over materials and methods. What it does allow is, that having used the materials of thought and association, a particular person should have a special property in the result, and a privilege of reproducing copies of that result. And it is, I conclude, because it is a moral impossibility that any two persons should have several and joint ownership in the same words, thoughts, expressions, or could contend with each other as to who it was that first composed a particular volume, that the law of copyright stands on a far surer basis of natural right, than the law which protects inventors. A book fulfils the conditions of property, an invention does not. The property in a book is a property in a product, in a mechanical or similar invention in a process.

No one could be aggrieved or anticipated by the fact that Mr. Dickens wrote the "Pickwick Papers," or Mr. Tennyson the "Idylls of the King," or Mr. Mill the "Elements of Political "Economy." Indeed the first named author furnishes an apt illustration of the difference between a process and a product. One element of the success of the "Pickwick Papers," however small an element of success it may have been, was the issue of the novel in successive numbers. This in a mechanical invention might have been patented, in a literary production could not be. Of course Mr. Dickens was imitated, or in the language of patentees, his process was pirated, and the serial system, as applied to works, became a common method of publication.

It may be, moreover, in the public interest that a sole privilege of publishing certain works should, under certain conditions, be granted to certain parties. But they should represent opposing interests, and therefore the principle of competition; they should not be compelled to pay office fees for their privilege of sale, and not thereupon be obliged to load the purchaser with the interest of capital expended in such a fashion; and they should, being responsible by their position and credit, be likely to reproduce correct as well as cheap copies of the works in which they have a privilege. This is, I believe, the economical defence of the privilege of printing Bibles, possessed by the Universities and Queen's printers.

Again, it is I believe, in the interest of the public that a different protection should be accorded to works of art and belles lettres, than ought to be granted to mechanical processes. The latter are solely relative, or almost always relative to material utilities. In such cases

the correspondence of supply and demand is generally immediate. Nay, the invention itself is ordinarily subsequent to a pressing demand for the convenience or utility afforded. But literary compositions generally are, and almost always affect to be, part of the process of national education. In the education of a people, the supply of material long precedes the demand for the thing. And yet the most valuable forms of literature are seldom, even under the protection of copyright, a source of much gain to authors, those works I mean which are of a solid and enduring kind; while the most lucrative kinds of composition, as one is informed, those which appear in serials, rarely need, from their perishable and temporary character, any protection at all. If, however, it could be shown that the protection of copyright is any stimulus to education by books, the advantage gained by the public in their composition, is a fair set off against the sole right of sale by the inventor; that right of sale being limited to the impression of a particular form of words, not being hampered by any ambiguity, and not being, except in very rare cases, a possible material for litigation.

The same reasoning, though with far less force, applies to copyright in patterns. It is not likely that two persons should invent the same pattern. It is doubtful whether any serious injury could be done to the draughtsman and the purchaser of his design, by its being copied. At any rate, that which I have heard many patentees allege, that priority in the market,—which any man may procure,—is a far more important element of success than priority of privilege in sale, applies with greater force to the invention of designs than to that of patented processes. Besides, the principle of the protection of patterns is very clearly allied to that of the protection accorded to trademarks. I fully admit that the copying of a trademark with a view which such a copy would generally have, is an offence of the same nature with forgery, and is not very far removed in point of turpitude, from the worst forms of that offence, is as serious an inconvenience to the public, and should be checked by stringent penalties.

The strongest case which can be, I believe, made out for protection to a quasi literary property, is that alleged in favour of engravers as against photographic copies of their originals. One may indeed doubt whether a photographic copy can ever be so exact as to deceive the eyes of such moderately practised persons as are purchasers of engravings. But if as is avowed, the free power of copying engravings in this manner would annihilate the art of engraving, and with it of course the power of making photographs of such works of art as are represented in engravings, a very reasonable plea for protection is set up, on the ground of the public interest. If the value of the engraving, however, consists in the

mere quality of rarity, it is a mere pabulum to contemptible vanity.

In conclusion, I have only to excuse myself for occupying so much of the Society's time in stating what are after all to most of you, I doubt not, very debatable positions. I called attention to the subject at the meeting of the British Association, at Manchester, in the year 1861, chiefly because I thought that a number of resolutions in favour of patents had been carried in an objectionable manner at a meeting of the Mechanical Section of that Society, that is, before parties who are *prima facie* interested in the maintenance, and even the extension, of the present system. From a report issued by the Inventors' Institution, which has been forwarded me since this paper was written, I see that the condition of patentees is to outward appearance, at least, vastly like that which has been recognised from time to time as characteristic of most protected interests, that of chronic lamentation; to the effect that existing guarantees are insufficient or delusive, and that larger measures of protection, easier processes of appropriation are necessary for the due development of patent rights. I see, too, that the authors of this report assume that literary works and inventive adaptations are identical in their nature, with singular simplicity assert a parallel between the copyright of a stupid book and the petrifaction of a mechanical process, and seem to hold that the patentee "stamps his thoughts on matter," whereas the more natural metaphor is that of planting his hoof upon mind.

The time is, I believe, long past in which the assertions of a privilege, however inveterate and traditional it may have become, are sufficient to establish a right. Without affecting to reconstruct society, thinkers in all branches of human knowledge, are more and more bent on investigating the principles on which social practices are founded. A long and large induction from the facts of history, and a corresponding experience in the working of political and economical causes, but lately accepted, have taught people how fully a wide observation becomes the refutation of a narrow one. One by one the cherished methods of our forefathers, after ages of loss, vexation, and disappointment, have been abandoned for the broad principles of spontaneous action and public utility. Those among us who were spectators or combatants in those economical battles which have characterised our civil history during the last forty years, know how grave and solemn were the appeals to tradition, and custom, and right; how gloomy were the prophecies of impending ruin; how coarse were the accusations of self interest and dishonesty, which even good men, the maintainers of the ancient system, uttered against the sagacious advocates of change. All men now allow the benefits of these fundamental alterations. Not indeed that the work of economical reform is ended, it is hardly more than begun. The

economist will probably, for a long time hence, be constrained to do battle against that protective instinct, which has been so long the enemy of mankind, and which seems, as successive enlightenment and broader experience narrows its powers of mischief, to get more cunning and plausible in defence of the fragments of its prerogative.

[The average number of patents taken out for ten years, 1838-47, in the United Kingdom, was 680 annually; of that number 450 were English, 157 Scotch, and 73 Irish patents. During the decade a marked increase in the number passed is noticeable. Comparing the first and the last year, the figures stand thus,—England, 407—498;* Scotland, 133—168; Ireland 64—76. What was the cost of obtaining a patent before the amendment of the Patent Law took place, it is not now easy to learn; but all that is officially known of the fees then payable is given in Table I (Appendix). The present scale of charges is set out in Table II (Appendix). Some further statistics of patents are shown by the next statement in the Appendix (Table III). There, under the head of "Applications for Provisional "Protection," the same tendency to increase is observable. The number returned against 1858 is excessive, from the cause stated on the table. In 1854, the numbers were 2,764, and in 1861, they rose to 3,276. But much greater equality is seen in the number of patents actually passed during those years. A petition for provisional protection costs 5*l.*; but upwards of 1,000 inventors, real or imaginary, annually take this preliminary step and proceed no further. This sanguine portion of the population thus throw away 5,000*l.* a-year upon their schemes. Of every *three* inventors who propose to themselves the protection of a patent, only *two* obtain it. The uniformity of this ratio, since 1854, considering how small are the numbers, is remarkable.—Ed., *S. J.*]

* House of Commons Paper, No. 23, Patents for Inventions, Sess. 1849.

APPENDIX.

TABLE I.—*Statement of the Number of* PATENTS GRANTED, *under the Old Patent Laws, in the* UNITED KINGDOM, *during the Years* 1845-6-7; *and of the* FEES *received by each Public Officer in respect of the same.*

Offices.	Number of Patents Granted.			Total Amount of Fees and Emoluments Received in respect of Patents Sealed and Completed.		
	1845.	1846.	1847.	1845.	1846.	1847.
ENGLAND—				£ s. d.	£ s. d.	£ s. d.
Attorney and Solicitor-General *	—	—	—	—	—	—
Great Seal Patent Office	575	494	498	10,481 5 8	9,229 6 8	9,327 13 2
Home Office—						
English patents	575	494	498	10,838 15 –	9,311 18 –	9,387 6 –
Scotch ,,	205	178	168	3,582 7 6	3,110 11 –	2,935 16 –
Irish ,,	99	89	74	759 16 6	683 1 6	567 19 –
Privy Seal Office	582†	493†	498†	3,218 3 –	2,608 11 –	2,627 18 –
Signet ,,	575	494	498	3,118 16 4	2,606 6 10	2,693 1 4
IRELAND‡—						
Chief Secretary's Office	99	89	74	2,114 18 9	1,883 10 8	1,578 6 2
Attorney and Solicitor-General	99	89	74	4,125 – –	3,708 6 8	3,083 6 8
Great Seal Patent Office	99	89	74	1,020 9 5	961 10 –	775 15 9
SCOTLAND§	205	178	168	—	—	—
Total	879	761	740	39,259 12 2	34,103 2 4	32,977 2 1

* The fees payable on all patents passing through the Attorney and Solicitor-General's Offices are 4*l.* 4*s.* for the report, and 5*l.* for signing the Bill; the particulars as to the amount received in the required period cannot be furnished.

† The number of patents which pass the Privy Seal may vary from the number which have passed the Great Seal; instruments sometimes not being completed.

‡ In addition to the fees payable on patents in Ireland, the sum of 14*l.* 8*s.* 6*d.* is payable to the English officers on each patent, viz., to the Home Office, and for stamp 9*l.* 3*s.* 6*d.*; to the Irish Office, 2*l.* 2*s.*, and to the Clerks of the Signet, 3*l.* 3*s.*

§ No account of the amount of fees received on patents is given in the Return, but the fees payable are stated to be:—1. At the Chancery Office, 25*l.* –*s.* 7½*d.*, whereof, prior to 31st September, 1847, 21*l.* 19*s.* 8½*d.* was paid into Her Majesty's Treasury, and 3*l.* –*s.* 11*d.* to the officers in Chancery; and subsequent to 31st September, 1847, 24*l.* 8*s.* 7½*d.* to the Treasury, and 12*s.* to the officers in Chancery. 2. At the office of the Great Seal, 14*l.* 19*s.* 5½*d.*; of which 14*l.* 12*s.* 9½*d.* is paid into the Treasury, and 6*s.* 8*d.* for box and wax. 3. At the Lord Advocate's Office, 4*l.* 4*s.*; 3*l.* 3*s.* to the Lord Advocate, and 1*l.* 1*s.* to his Secretary.

Note.—Abstracted from House of Commons Paper, No. 457, Letters Patent. Sess. 1847-8.

TABLE II.—*Statement of all* FEES *and* STAMP DUTIES *in lieu of Fees paid in the* UNITED KINGDOM, *for passing Patents of Invention under the Patent Law Amendment Act of* 1852 (15 *and* 16 *Vict., cap.* 83), *and under the Act to substitute Stamps for Fees* (16 *and* 17 *Vict., cap.* 5), *from the* 1*st October*, 1852, *to* 31*st December*, 1853.

Number.	Designation of Process.	Cost of Each. £	s.	d.	Total Cost to the Patentees. £
4,256	Petitions for grants of letters patents	5	–	–	21,280
2,927	Notices of intention to proceed with application	5	–	–	14,635
190	Notices of objection to grant.....	2	–	–	380
2,420	Warrants for patents	5	–	–	12,100
2,384	Patents sealed	5	–	–	11,920
2,136	Specifications filed	5	–	–	10,680
273	Entries of assignments of patents and licences	–	5	–	68
1,500	Searches and inspections	–	1	–	75
128	Extension* of English patents to Ireland	6	13	4	853
126	Extension* of English patents to Scotland	6	13	4	840
5	Irish and Scotch patents extended* to England	6	13	4	33
5,625	Folios of office copies.....	–	–	2	47
	Total	—			72,911

* The 53rd section of the Act applied only to such patents as had passed under the old law, and on which the specification had not been enrolled. The old law allowed six months from the date of the patent for the enrolment of the specification, therefore no extended patents have been passed since the 31st March, 1853.

Note.—Abstracted from the First Report of the Commissioners of Patents.

TABLE III.—*Statement of the Number of Applications for* PROVISIONAL PROTECTION *of Patents, and of the Number of* PATENTS PASSED; *of the Number of* SPECIFICATIONS FILED; *and of the Number of Applications* LAPSED *or* FORFEITED *in the* UNITED KINGDOM *during Nine Years; together with the Amount of Stamp Duties Paid on Patents.*

Year.	Applications for Provisional Protection.	Number of Patents Passed.	Number of Specifications Filed.	Applications Lapsed or Forfeited.*	Amount of Stamp Duties Paid on Passing Patents.
					£
1853†.....	4,256	3,099	2,136	1,157	72,911
'54	2,764	1,876	1,828	888	53,030
'55	2,958	2,044	1,989	914	73,582
'56	3,106	2,094	2,048	1,012	91,116
'57	3,200	2,028	1,976	1,172	83,887
'58	3,007	1,954	1,880	1,047	83,582
'59	3,000	1,976	1,897	1,024	95,122
'60	3,196	2,061	1,965	1,135	108,133
'61	3,276	2,047	2,015	1,229	99,979
Total	28,763	19,179	17,734	9,578	761,342

* The applicants having neglected to proceed for their patents within six months of provisional protection.

† For the fifteen months ended with December, 1853, the business under the old Patent Acts was suspended for some time, till the opening of the new office on the 1st October, 1852; this caused an extra number of applications to be made in the first year.

Note.—Abstracted from the Annual Reports of the Commissioners of Patents for Inventions, made pursuant to the Act 15 and 16 Vict., cap. 83.